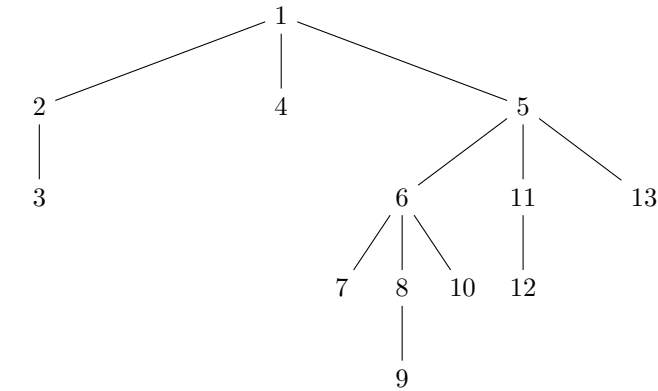# NOTES ON STACKS AND DEPTH FIRST SEARCH

ERIC MARTIN

Popping a path from the top of the stack (right of list) and pushing its extensions to the top of the stack.

$\big[[1]\big]$

$[]$ $\qquad\qquad$ $[1]$

$\big[[1,5],[1,4],[1,2]\big]$

$\big[[1,5],[1,4]\big]$ $\qquad\qquad$ $[1,2]$

$\big[[1,5],[1,4],[1,2,3]\big]$

$\big[[1,5],[1,4]\big]$ $\qquad\qquad$ $[1,2,3]$

$\big[[1,5]\big]$ $\qquad\qquad$ $[1,4]$

$[]$ $\qquad\qquad$ $[1,5]$

$\big[[1,5,13],[1,5,11],[1,5,6]\big]$

$\big[[1,5,13],[1,5,11]\big]$ $\qquad\qquad$ $[1,5,6]$

$\big[[1,5,13],[1,5,11],[1,5,6,10],[1,5,6,8],[1,5,6,7]\big]$

$\big[[1,5,13],[1,5,11],[1,5,6,10],[1,5,6,8]\big]$ $\qquad\qquad$ $[1,5,6,7]$

$\big[[1,5,13],[1,5,11],[1,5,6,10]\big]$ $\qquad\qquad$ $[1,5,6,8]$

$\big[[1,5,13],[1,5,11],[1,5,6,10],[1,5,6,8,9]\big]$

$\big[[1,5,13],[1,5,11],[1,5,6,10]\big]$ $\qquad\qquad$ $[1,5,6,8,9]$

$\big[[1,5,13],[1,5,11]\big]$ $\qquad\qquad$ $[1,5,6,10]$

$\big[[1,5,13]\big]$ $\qquad\qquad$ $[1,5,11]$

$\big[[1,5,13],[1,5,11,12]\big]$

$\big[[1,5,13]\big]$ $\qquad\qquad$ $[1,5,11,12]$

$[]$ $\qquad\qquad$ $[1,5,13]$